

REMARKS

Applicants have amended claims 1, 21, and 22 to more particularly point out and distinctly claim the subject matter which they regard as their invention. Support for the amendments can be found in the specification, at page 23, Table 1. No new matter has been introduced by the amendments.

Claims 1-6 and 13-22 are currently pending. Reconsideration of this application, as amended, is requested in view of the following remarks.

Rejections under 35 U.S.C. § 102(b)

The Examiner rejects 1-6, 13-19, 21, and 22 for anticipation, relying on JP 2002212310 (JP '310). Independent claims 1, 21, and 22 will be discussed first.

Claim 1, as amended, covers a polymer composite molded body having linear expansion coefficients of 8×10^{-5} (/°C) or lower in at least three directions perpendicular to each other. The molded body includes (1) a polymer matrix, (2) a fiber cloth disposed in the polymer matrix, and (3) fibers dispersed in the polymer matrix.

Claims 21 and 22 cover polymer composite molded bodies similar to that of claim 1. In the molded body of claim 21, some of the fibers penetrate into the pores of the fiber cloth. In the molded body of claim 22, some of the fibers are located in the fiber cloth. Both the molded bodies of claim 21 and 22 have linear expansion coefficients of 8×10^{-5} (/°C) or lower in at least three directions perpendicular to each other.

JP '310 discloses a molded article containing a polymer material and polyester fibers. The polyester fibers are embedded in the polymer material and oriented in a single direction. According to this reference, the molded article may further contain fabrics (corresponding to the fiber cloth recited in claims 1, 21, and 22) to reinforce the molded article. See paragraph [0054]. The article has excellent anisotropic properties. See the abstract and paragraphs 0013 and 0014. What is meant by "anisotropic properties" is that properties in one dimension are different from those in other dimensions. For example, all of the molded articles described in examples 1-3 have low linear expansion coefficients ($< 4 \times 10^{-5}$ /°C) in the direction parallel to the orientation of

the fibers and significant higher linear expansion coefficients (higher than $21 \times 10^{-5}/^{\circ}\text{C}$) in the direction perpendicular to the orientation of the fibers. See the last row of Table 1. Clearly, JP '310 does not teach molded articles having linear expansion coefficients of $8 \times 10^{-5}/^{\circ}\text{C}$ or lower in at least three directions perpendicular to each other, as required in claims 1, 21, and 22. Thus, claims 1, 21, and 22 are not anticipated by this reference.

For the same reasons set forth above, claims 2-6 and 13-19, all dependent from claim 1, are not anticipated by JP '310.

Rejection under 35 U.S.C. § 103(a)

The Examiner rejects claims 1-6 and 13-22 for obviousness relying on JP '310. Applicants disagree and will, again, discuss independent claims 1, 21, and 22 first.

As discussed above, claims 1, 21, and 22 all require molded bodies have linear expansion coefficients of $8 \times 10^{-5}/^{\circ}\text{C}$ or lower in at least three directions perpendicular to each other.

Also as discussed above, JP '310 teaches a molded article with improved anisotropic properties. In other words, JP '310 suggests a molded article having improved properties in one dimension, but not in other dimensions. Table 1 of this reference shows the anisotropic thermal property of three exemplary molded articles. That is, all of them have low linear expansion coefficients ($< 4 \times 10^{-5}/^{\circ}\text{C}$) in the direction parallel to the orientation of the fibers, but have much higher linear expansion coefficients ($> 21 \times 10^{-5}/^{\circ}\text{C}$) in the direction perpendicular to the orientation of the fibers. As JP '310 suggests a molded article having a higher linear expansion coefficient in one direction and having lower coefficients in all the other directions (including the direction perpendicular to the first-mentioned direction), it **teaches away** the molded bodies of claims 1, 21, and 22, which require molded bodies have linear expansion coefficients of $8 \times 10^{-5}/^{\circ}\text{C}$ or lower in at least three directions perpendicular to each other. In other words, this reference does not render claims 1, 21, and 22 obvious.

For the same reasons set forth above, claims 2-6 and 13-20, all dependent from claim 1, are also not rendered obvious by JP '310.

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CONCLUSION

Applicants submit that the rejections asserted by the Examiner have been overcome and claims 1-6 and 13-22, as pending, cover subject matter that are novel and nonobvious over the cited prior art. Applicants respectfully request that the Examiner allow this application.

Enclosed is a \$120 check for the Petition for Extension of Time fee. Please apply any charges to deposit account 06-1050, referencing Attorney's Docket No. 14157-012001.

Respectfully submitted,

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